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COOLMATIC®



CF

D Bedienungsanleitung

GB Instruction Manual

F Notice d'emploi

E Instrucciones de uso

I Istruzioni per l'uso

NL Gebruiksaanwijzingen

DK Betjeningsanvisning

N Bruksanvisning

S Bruksanvisning

FIN Käyttöohjeet



GB

Safety instructions

- Never touch uninsulated cables with bare hands. This applies especially to handling AC cables. **Danger!**
- In installations in boats, if the devices are mains operated, it is important that the system is protected by a fuse and an earth leakage protection device. **Danger!**
- Installation of AC in boats should be carried out by a qualified electrician.
- Always ensure that your refrigerator is disconnected from the battery before using a high-speed battery charger!
- Always ensure that the correct voltage is applied to the refrigerator, the voltage is stated on the refrigerator or cooling unit's data plate.
- Never open the cooling circuit!
- Always be aware that batteries contain corrosive acid and therefore should be treated with extreme care.
- The cooling device is not appropriate for transporting corrosive or solvent-comprising substances.
- Never obstruct vents to the refrigerator's compressor.
- Defrost the refrigerator on a regular basis.
- Never use hard or sharp implements to remove ice from the evaporator.
- Never use abrasive or solvent based materials when cleaning the evaporator.
- Your refrigerator or cooling device, when it comes to the end of its working life, should be disposed of by a specialist to ensure that it does not contaminate the environment.
- Don't use any electric appliance inside the cooling compartment.

Safety indications in the text are marked with this symbol:



General

Application and operative range

The coolbox contains compartments with different temperature zones. The values for inside temperature are related to the middle of the box. Your cooler is designed to refrigerate or freeze food. The unit may also be used for camping purpose. If you wish to refrigerate medicines, first check if the refrigerator's cooling capacity meets the demands of the respective medicines. The refrigerator is designed to operate in ambient temperatures between -10° and $+55^{\circ}$ Celsius in a maximum air humidity of 90 %. The refrigerator can operate continuously at an angle of 30° maximum. All materials which have been used in the manufacture of these appliances are generally recognized as fit for purpose. The refrigerant charge used in the cooling circuit is CFC-free.

Installation

After unpacking the device check that no parts are missing. Place the cooling device in a dry place which is protected against splashing water. Devices, equipped with a mains power pack must not be used outdoors and it must be taken care of that these devices do not get wet. These units consist of two connections: for the 12/24 V DC-net and the 110/240 V AC-net.

It should not be placed directly adjacent to sources of heat such as heating, gas ovens, hot-water, pipes or under the blazing sun.

The cooling device must be installed in such a way that the air which is warmed up through the condenser can escape without problems.

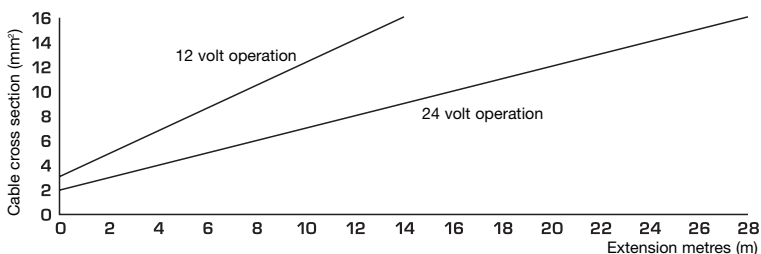
Battery operation

Your cooling device can be operated with 12 V or 24 V direct voltage. Prior to connection check whether the voltage indication on the type plate is in accordance with the battery voltage.

Connect your cooling device as directly as possible to the poles of the battery or to a plug connection with at least 15 A fuse.

Pay attention that the plus wire is connected on to the positive pole and the minus one to the negative pole. In order to avoid loss of voltage and thus decrease of performance, the cable should be as short as possible and not interrupted. For this reason avoid additional switches, plugs or feeder boxes.

If the connecting cable is too short or does not belong to the delivery scope of your model, you have to buy a corresponding cable or an extension by specialized dealers. Determine the required cable cross section by means of the following schedule.



Here you find the necessary wire cross section



Note: High-speed battery chargers may only be connected to the battery after the cooling device and all other consumers have been disconnected from the battery.

Overvoltage could cause damage to the electronics of the units.

The appliance takes a small amount of idle current. Always disconnect it from the energy source when not in use. Your cooling device is equipped with a reverse battery protection. It protects your cooling device against reverse battery by battery connection and against short circuit. As a protection for your battery, the cooling device switches off automatically if the voltage is not sufficient. You will find the cut-out/cut-in voltages in the Technical data.

Operation from the mains

CF-18, CF-25

In case you want to operate the coolbox from the 230 V mains, please use the MOBITRONIC mains rectifier EPS-100W or MPS-35.

CF-35, CF-40, CF-50, CF-80, CF-110

Your coolbox is equipped with an integrated multi voltage power supply (110-240 V) and can be connected directly to the alternating current. The integrated power supply is equipped with an automatic switchover to mains supply when the unit is connected to, although the DC cable still is connected. That is why the socket should be installed close to the unit and be easy accessible. After the security device is active, parts of the equipment still may be under voltage. During switching process the red LED might flash for some minutes.



Attention, danger! Never manipulate plugs or switches with wet hands or when your feet are in contact with water! If you operate your cooling device on board of a boat by means of shore connection to 230 V-network, you must in any case insert a residual current device. Contact a specialist for advice!

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Cleaning

Your cooling device will be delivered cleaned from the factory – you nevertheless should clean prior to initial use. Take a cloth which has been slightly moistened with lukewarm water. Pay attention that no water drops into the seals and possibly damages the electronics. Dry off the cooling device with a cloth after cleaning. Clean the device periodically and as soon as it is dirty.



Attention: Never use solvents or agents with sand or acid parts for cleaning the cooling tank.
Never use brushes, graters or hard and sharp tools.

Putting into service

Switch on the coolbox by pressing the “on” button or pushing the slide switch to “high” for operation at a starter battery or to “low” for the operation at a service battery. The LED beside the switch on button is a flashing light and flashes only if the battery power is insufficient for supply of the coolbox. If this is the case, check your battery.

Putting out of service

If you wish to cut out the cooling device for a longer period, remove the plug from the AC line or disconnect the cooling device cable from the battery. Clean the cooling device and leave the lid slightly open. Thus preventing the formation of mold.

Defrosting

Air humidity can deposit on the evaporator or in the interior of the cooling device as frost so that the refrigerating performance is reduced. In order to remove the ice coat never use hard or sharp tools which can cause damage to the plastics or the evaporator.

Therefore defrost the cooling device in good time. Take out the refrigerated products and store them in another cooling device so that they remain refrigerated. Switch off the box and leave the lid open. Wipe the condensed water or – if existing – empty the drip basin.

Changing the light

In case your coolbox is equipped with an interior light, this electric light bulb may be exchanged.

Grab the lamp at the switch pin and press this pin forwards, so that the transparent part of the lamp separates from the housing. Now you can exchange the electric light bulb and put the lamp back into the housing.

Tips for energy saving

- Mount the refrigerator in a cool dry place away from direct sunlight.
- Always allow food to cool before storing in the refrigerator.
- Defrost your refrigerator periodically or when the evaporator is covered with a thick layer of ice.
- Do not set the thermostat colder than the required temperature.
- Do not leave the lid or the door open any longer than necessary!
- Always ensure that the compressor and condensor are in a well ventilated area.

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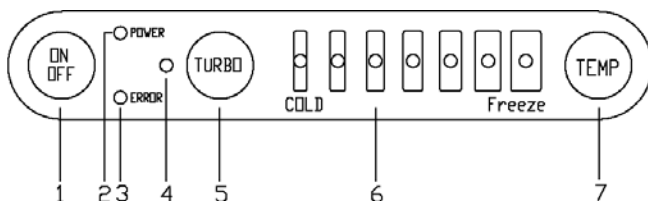
Standards, Directives

These appliances meet the following European directives:

CE – 73/23/EEC – low voltage directive
 – 89/336/EEC – EMC directive

e 1 – 95/54/EEC

Operator control panel CF-25, CF-35, CF-40, CF-50, CF-80, CF-110



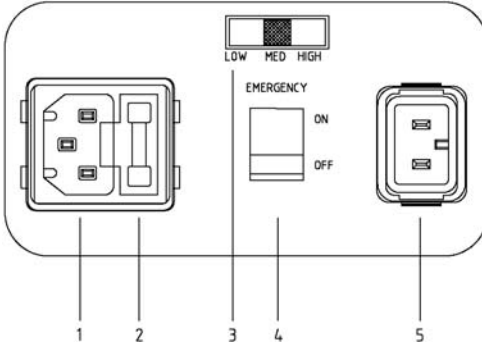
1. Power Switch: Press for ON/OFF
2. Power Control LED: LED light green when the box is ready to operate, LED switches to yellow when preset temperature is reached.
3. Error LED: Flashes red in case system is not ready to operate.
4. Turbo Control LED: lights yellow to indicate the Turbo mode is switched on.
5. Turbo Switch: Press for fast cooling. Will switch off when preset temperature is reached. Press again to switch off.
6. Temperature LEDs: 7 LEDs indicate a temperature range from +10° C to -18° C in steps of approximately 5° C.
7. Temperature Switch: Press once to activate next LED. Hold to cycle all available settings.

Operator control panel CF-18

Temperature control by rotational electronic thermostat. Power LED switches from green to yellow when preset temperature is reached.

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Connector Panel (Equipment depending on box type)

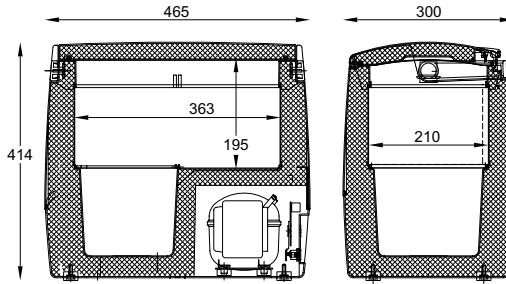


1. Socket for mains supply (not CF-18, CF-25)
2. Fuse
3. Switch for setting battery protection voltage, values according to specification table.
4. Emergency Switch: Should be in "OFF" position for normal operation. "ON" position keeps cooling function upright in case of electronic defect (not CF-18).
5. Socket for DC supply

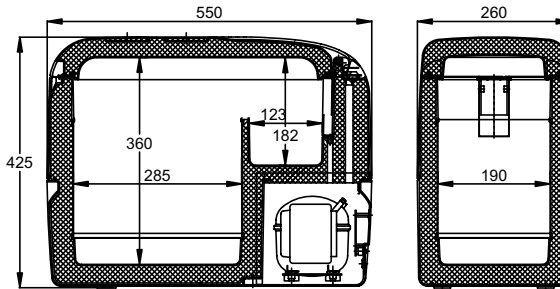
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Specifications	CF-18	CF-25	CF-35	CF-40	CF-50	CF-80	CF-110	
Art.-No.:	CF-018	CF-025	CF-035	CF-040	CF-050	CF-080	CF-110	
Contents:	18 L	23 L	31 L	37 L	49 L	80 L	106 L	
System:	direct evaporator							
Temperature section:	+10° C to -18° C							
Weight:	11 kg	14 kg	15 kg	16 kg	18 kg	23 kg	25 kg	
Power consump./h	power input x running time per hour							
Running time per h								
Ti = 5° C, Ta = 20° C	9 %	11 %	12 %	13 %	10 %	25 %	30 %	
Ti = 5° C, Ta = 32° C	13 %	16 %	17 %	18 %	15 %	35 %	40 %	
Nominal DC 12 V	3,1 A	6,8 A	6,0 A	6,0 A	7,0 A	7,5 A	7,5 A	
Current DC 24 V	1,9 A	3,0 A	3,0 A	3,0 A	3,0 A	3,5 A	3,5 A	
AC 100-240 V			1,3-0,7 A	1,3-0,7 A	1,3-0,7 A	1,3-0,7 A	1,3-0,7 A	
Manufactured materials:	Injection moulded housing with integrated Rollbond evaporator; blow moulded lid; PU foam insulation							
Compressor specification:	Fully hermetical Danfoss BD35F* compressor with control electronics and integrated low voltage protection for 12 V and 24 V DC. Dynamic ventilated condenser, Aluminium Rollbond evaporator, electronic reverse polarity protection, adjustable electronic thermostat * CF-080, CF-110 = BD50F							
Scope of delivery:	Operation manual DC-connection cable	Operation manual DC/AC- connection cable	Operation manual, DC/AC-connection cable, wire basket, detachable handles					
Drawings with dim.:	page 62	page 62	page 62	page 62	page 63	page 63	page 63	
Battery controller:	The cool box is equipped with a battery controller cutting the compressor in or out in order to protect battery and compressor.							
Cut-out voltage:	low	high		low	med	high		
12 V	10,4	11,5		10,4	11,0	12,0		
24 V	22,1	24,0		21,6	23,3	25,0		
Cut-in voltage:	low	high		low	med	high		
12 V	11,5	12,5		11,2	12,0	12,9		
24 V	23,6	25,4		23,0	24,5	26,3		

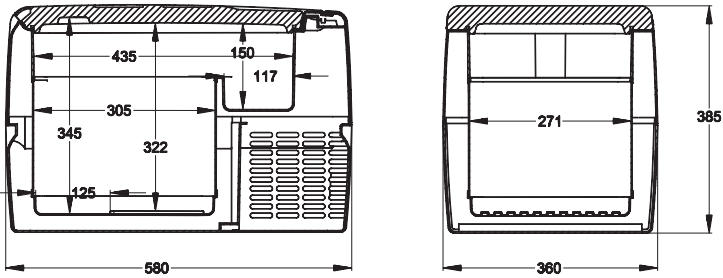
CF-18



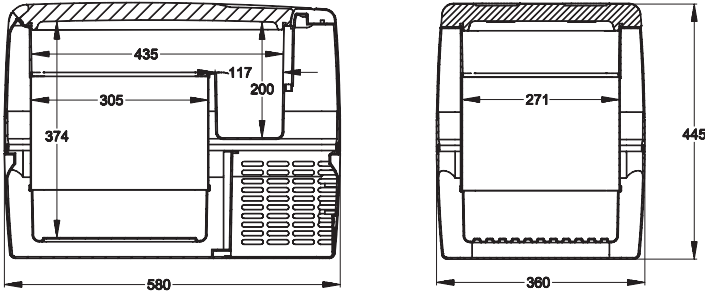
CF-25



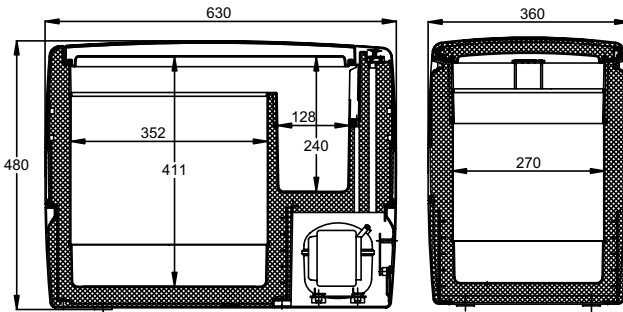
CF-35



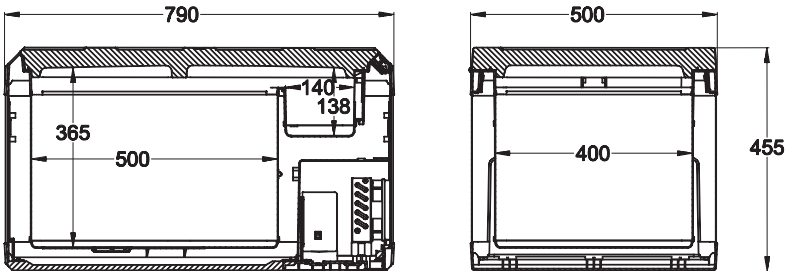
CF-40



CF-50



CF-80



CF-110

